

ABSTRACT OF THE DISCLOSURE

The present invention provides a bright and high-resolution display apparatus having a dynamic range exceeding the number of gray-scale voltage (or current) outputs, which a signal driver is capable of generating. In accordance with the present invention, a select period, in which a group of pixels on each row is driven, is divided into a plurality of sub-periods. The signal driver supplies a voltage output varying from sub-period to sub-period to selected pixels through a signal electrode. The pixel is capable of expressing various values of a gray scale, the size of which is at least approximately equal to (the number of gray-scale voltage outputs, which the signal driver is capable of generating) \times (the number of sub-periods). By changing the ratio of the length of a sub-period to the length of another sub-period or the range of the driving voltage (or current), the dynamic range of the display can be further increased.